

Amendments to the specification

Please cancel the paragraph at page 3, lines 6 & 7 and replace with:

The present invention also relates to modulating for example stimulating or activating at least one of differentiation, proliferation or migration of the immune cells.⁴

Please cancel the paragraph at page 3, lines 8 to 10 and replace with:

A further aim of the present invention is to provide a method for stimulating release of immune cells from bone marrow comprising providing Myeloid Related Proteins (MRP) or derivatives thereof to said cells.

Please cancel the paragraph at page 10, lines 13 to 28 and replace with:

Recombinant proteins

Human S100A8, S100A9, and S100A12 cDNAs were synthesized by RT-PCR from neutrophil RNA isolated using Trizol[®] reagent according to the manufacturer's instructions (GibcoBRL, USA). cDNAs were cloned into the pET28 expression vector (Novagen, Madison, WI) and transformed in E. coli HMS174. Expression of recombinant MRPs was induced with 1 mM IPTG for 16 h at 16°C. After incubation, cultures were centrifuged at 5,000 x g for 10 min. The pellet was resuspended in PBS/NaCl 0.5 M/imidazole 1 mM and lysed by sonication. Lysates were then centrifuged at 55,000 x g for 25 min and the supernatants collected. Recombinant His-tag MRPs were purified using a nickel column. His-tag proteins bound to the column were cleaved from their His-tag by adding 10 U of thrombin and incubated for 16h at room temperature. Recombinant MRPs were eluted with PBS. The digestion and elution process was repeated once to cleave the remaining undigested recombinant proteins. Contaminating thrombin was extracted from the eluates using streptavidin-agarose and contaminating LPS was removed by polymyxin B[®]-agarose gel (Pierce, Rockford, IL). Eluted proteins were analyzed by immunoblot and SDS-PAGE.

Please cancel the paragraph at page 11, lines 1 to 12 and replace with:

Intravenous injections

Animals were put on a heated cushion to dilate the tail vein 15 minutes before injection. Two hundred μ l of S100A8, S100A9, or S100A8/A9 (0.006–60 μ g/ml) was then injected i.v. in the tail vein of the mouse, corresponding to 0.05 to 500 μ g of protein per kg of body weight. Animals were sacrificed by CO₂ asphyxiation at times ranging from 5 min to 24 h later; peripheral blood was collected by cardiac puncture and diluted 1:20 in PBS-EDTA 5 mM. Total leukocytes were counted using a hemacytometer following acetic blue staining. Bone marrow cells were collected by flushing with PBS-EDTA 5 mM through incisions made in the femur, followed by desegregation. Cytospin preparations of both blood and bone marrow cells were analyzed after ~~Wright-Giemsa~~-differential staining with Wright-Giemsa® stain. In some experiments, animals were treated with 150 mg/ml of cyclophosphamide i.p. 24 h prior to being injected with the S100 proteins in order to induce a neutropenia.